Certificate of Analysis for NR-13232

Listeria monocytogenes, Strain FSL J2-071

Catalog No. NR-13232

For research only. Not for human use.

Contributor:

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Product Description:

Bacteria Classification: *Listeriaceae, Listeria*
Species: *Listeria monocytogenes*
Strain: FSL J2-071
Serotype: 4c
Original Source: *Listeria monocytogenes* (*L. monocytogenes*), strain FSL J2-071 was isolated in New York in February 1994 from a case of bovine septicemia.[1]
Comment: The complete genome of *L. monocytogenes*, strain FSL J2-071 has been drafted (GenBank: AARN04000000).[2] For more sequencing information, refer to the Broad Institute's Listeria Genome Project.

L. monocytogenes is a Gram-positive, facultative intracellular bacterium that is extremely tolerant of external stresses (pH 3-12, temperatures ranging from 1°C to 45°C, and high salt). *L. monocytogenes* encompasses a diversity of strains with varied virulence and pathogenic potential. There are 13 serotypes (1/2a, 1/2b, 1/2c, 3a, 3b, 3c, 4a, 4b, 4c, 4d, 4e, 5 and 7) that have been isolated from mammalian, bird, fish and shellfish species as well as environmental sources. Of these, only 3 serotypes (1/2a, 1/2b, and 4b) are frequently isolated from outbreaks of human listeriosis. The most common cause of infection is through ingestion of contaminated foods, in particular milk, meat or vegetable products. The infective dose is unknown and varies with species.[3,4]

L. monocytogenes, strain FSL J2-071 has a ribotype of DUP-1061A, the most common in lineage IIIA. Lineage III strains are rare and predominantly associated with animal disease.[2,3]

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X Brain Heart Infusion broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:

NR-13232 was packaged aseptically, in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Condition:

Media:
Nutrient or Brain Heart Infusion broth or equivalent
Tryptic Soy Agar with 5% Sheep Blood
Incubation:
Temperature: 37°C
Atmosphere: Anaerobic
Propagation:
1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tubes and plate at 37°C for 24 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Listeria monocytogenes*, Strain FSL J2-071, NR-13232."

Biosafety Level: 2

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2007; see www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm.

Disclaimers:

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References:

1. Dr. Patrick McDonough, personal communication.
2. Broad Institute *Listeria monocytogenes* Database
3. Liu, D., et al. "Listeria Monocytogenes Subgroups IIIA, IIIB, and IIIC Delineate Genetically Distinct Populations with Varied Pathogenic Potential." J. Clin. Microbiol. 44 (2006): 4229-4233. PubMed: 17005751.
4. Glaser, P., et al. "Comparative Genomics of *Listeria* Species." Science 294 (2001): 849-852. PubMed: 11679669. GenBank: AARN04000000.
5. Liu, D., et al. "Toward an Improved Laboratory Definition of *Listeria monocytogenes* Virulence." Int. J. Food Microbiol. 118 (2007): 101-115. PubMed: 17727992.
6. Rocourt, J. and C. Buchrieser. "The Genus *Listeria* and *Listeria monocytogenes*: Phylogenetic Position, Taxonomy, and Identification." In: E. T. Ryser and E. H. Marth, *Listeria*, Listeriosis, and Food Safety (3rd ed.) New York: Marcel Dekker, Inc., pp 1-20.
7. Seeliger, H. P. R. Listeriosis. 2nd ed. Basel: Karger, 1961.

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